

DISCUSSION OF THE AMENDMENT

Due to the length of the specification herein, Applicants will cite to the paragraph number of the published patent application (PG Pub) of the present application, i.e., US 2006/0241324, when discussing the application description, both in this section and in the Remarks section, *infra*, rather than to page and line of the specification as filed.

The specification has been amended by inserting appropriate headings, including a brief description of the drawings, as well as such a description.

Claim 1 has been amended to recite that the cyclic carbonic ester component is present in solvent amounts for the catalyst, as supported throughout the specification, and particularly at paragraphs [0016] and [0065].

Claim 6 has been amended to depend on Claim 3.

New Claims 13-16 have been added. Claim 13 is supported in the specification at paragraph [0016]. Claims 14-16 are supported in Examples 1 or 3.

No new matter is believed to have been added by the above amendment. Claims 1-16 are now pending in the application.

REMARKS

Applicants thank the Examiner for the courtesy extended to Applicants' attorney and Applicants' assignee's representative during the interview held July 23, 2007, in the above-identified application. During the interview, Applicants' attorney explained the presently-claimed invention and why it is patentable over the applied prior art, and discussed other issues raised in the Office Action. The discussion is summarized and expanded upon below.

The rejection under 35 U.S.C. § 102(b) of Claims 1, 9 and 10 as anticipated by US 5,012,008 (Drago et al), is respectfully traversed.

Drago et al discloses a supported amorphous phase heterogeneous catalyst (SAPC) for biphasic hydroformylation of olefins. Drago et al discloses that such catalysts are known materials and are characterized as comprising a complex containing a Group VIII metal complex dispersed in a non-volatile film containing dissolved triphenylphosphine which is supported on a porous solid support, wherein the amorphous (non-crystalline) phase can be a non-volatile liquid or amorphous (preferably rubbery) polymer which forms a coating on the solid support that prevents loss of said coating to the vapor or liquid phase reactant (column 3, lines 20-29). Drago et al's invention is the discovery of the use of such catalysts for hydroformylation. Drago et al discloses further that their SAPC catalyst also contains a biphyllic ligand, which are preferably phosphines (column 6, line 8ff). Among applicable non-volatile amorphous film materials, Drago et al lists propylene carbonate (column 6, line 49ff, especially lines 55-56). Drago et al discloses further that the amount of nonvolatile liquid film is about 1-30 wt.% based on the weight of the carrier or support material (column 7, lines 33-35). Of the 19 examples disclosed by Drago et al, only Examples 1, 5 and 10 employ propylene carbonate, and in an amount of 0.08 gm, which as a percentage of the reaction mixture in these examples, is considerably less than 1%. Indeed, less than 0.3 % of propylene carbonate is used.

As Applicants' attorney pointed out during the above-referenced interview, Drago et al does not anticipate the presently-claimed invention, since the propylene carbonate disclosed therein is not intended as a solvent and is not present in solvent amounts.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejections under 35 U.S.C. § 102(b) of Claims 1, 3, 4 and 9 as anticipated by US 3,992,453 (Massie), is respectfully traversed.

Massie is drawn to a hydroformylation process carried out in the presence of a cobalt-containing compound catalyst and an ester of carbonic acid disclosed as a promoter. No particular amount range is disclosed for the promoter. However, in the Examples, the amount of promoter is of the same order of magnitude as the catalyst. Note that Massie discloses that their hydroformylation may be effected in inert organic media, and lists exemplary compounds which are all hydrocarbons, i.e., cyclic carbonates are not included (column 5, lines 7-12).

As Applicants' attorney noted during the interview, Massie does not anticipate the presently-claimed invention because his ester of carbonic acid is not disclosed as present, and would not appear to be present, in solvent amounts.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejection under 35 U.S.C. § 103(a) of Claims 2, 5, 6-8, 11 and 12 as unpatentable over Drago et al and Massie in combination, are respectfully traversed.

Neither reference remedies the deficiencies, discussed above, in the other. Contrary to the finding by the Examiner, and as noted by Applicants' attorney during the interview, Massie does not disclose the presence of his ester of carbonic acid in an amount of at least 15[%] by weight. In addition, as Applicants' attorney also pointed out, while Massie discloses that his hydroformylation process may be carried out in a continuous manner, and that after completion of the reaction, the reactor effluent is continuously withdrawn and

Application No. 10/525,376
Reply to Office Action of June 1, 2007

subjected to conventional means of separation, with recycling of still usable components (column 5, lines 41-65), Massie does not disclose or suggest the particular processes recited in Claims 5-8. As the Examiner admits, Drago et al do not disclose or suggest any of these limitations.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

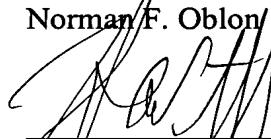
The rejection of Claims 1-5 and 8-12 on the ground of nonstatutory obviousness-type double patenting over Claims 1-3, 5-14 and 20 of US 7,193,116 (Moeller et al), is respectfully traversed. There is no disclosure or suggestion in the claims of Moeller et al to avoid ligands that contain a sulfonic acid group or sulfonate group. Accordingly, it is respectfully requested that this rejection be withdrawn.

Applicants respectfully submit that all of the presently-pending claims in this application are now in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon



Harris A. Pitlick
Registration No. 38,779

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 03/06)

NFO:HAP\la